

REMARKS

Claims 1 and 3-7 are in this application and are presented for consideration. By this Amendment, Applicant has amended claims 1 and 3. Claim 2 has been canceled. Applicant has added new claims 4-7.

The Office Action states that the supplemental information disclosure statement dated February 6, 2002 is not a proper information disclosure statement.

The supplemental information disclosure statement dated February 6, 2002 was submitted to provide a description of the relevancy of the reference JP 51-13503 properly submitted in the information disclosure statement of January 23, 2002. The references "JP-13593" and "JP-13504" referred to in the supplemental information disclosure statement of February 6, 2002 were typographical errors and were meant to refer to the previously submitted reference JP 51-13503. As such the January 23, 2002 supplemental disclosure statement should have stated "JP-51-13503 discloses another prior art which differs from a conventional brush arm disclosed in the present specification (Fig. 3A, 3B, 4A, 4B). A brush 9 of JP 51-13503 can be engaged into a hole 3 of a brush holder 1, but using a resilient member 7." Applicant respectfully requests that the Examiner consider the relevancy description of the Japanese reference based on this clarification.

The drawings have been objected to as failing to comply with 37 CFR 1.84(p)(5). The Office Action states that the drawings include reference character "3" which is not mentioned in the description.

Applicant has attached a replacement sheet of drawings of Figure 2A. Applicant has

amended Figure 2A to delete reference character "3". Applicant respectfully requests that the Examiner enter the drawings as now presented.

Claim 1 has been rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Laid-Open Application No. S63-66054 ("JP '054" hereinafter).

The present invention relates to a brush holder device that is used in motors. The brush holder device includes a holder and a brush arm. Both the holder and the brush arm have brush holder contact portions. Each brush contact portion of the brush arm is located at an edge that defines the engagement hole of the brush arm. Each brush contact portion of the holder is located at an edge that defines the engagement hole of the holder. The engagement hole of the holder is aligned with the engagement hole of the brush arm when the holder is connected to the brush arm. The brush contact portions of the brush arm extend through the engagement hole of the holder so that each brush contact portion of the brush arm is next to one of the brush contact portions of the holder when the brush arm is connected to the holder. The brush contact portions of the holder and the brush arm engage the engagement portion of the brush so that the brush is connected to the brush arm and the holder. The connection of the brush arm to the holder is significant in the present invention because it advantageously enhances the strength, rigidity and durability of the holder. This connection advantageously prevents torsion of a brush-holding portion of the brush arm. This advantageously provides a brush holder device that has a longer service life. Further, the brush contact portions of the brush arm and the holder advantageously provides for better heat radiating characteristics than conventional techniques. The prior art as a whole fails to disclose such features or advantages.

JP '054 discloses a brush arm 1 having an insertion hole 2 and a fixing plate 7 having a hole 8. A brush 13 is inserted into the brush insertion hole 13 of the brush arm 1. The brush 13 is then press-fitted to the fixing plate 7 via brush-pressing portions 9, 10 of the fixing plate 7 and via bent portions 11, 12 of the fixing plate 7 that press up against bent portions 3, 4 of the brush arm 1.

JP '054 fails to teach or suggest the combination of brush contact portions formed on opposite edges in a longitudinal direction of a brush arm. As clearly shown in Figure 1 of JP '054, the brush-pressing portions 9, 10 are formed on edges in a direction transverse of the longitudinal direction of the brush arm 1. In contrast to JP '054, one brush contact portion of the holder in the present invention is located opposite another brush contact portion of the holder in a longitudinal direction of the brush arm. This is significant in the present invention because this allows space for the brush contact portions of the brush arm to pass through the engagement hole of the holder. This advantageously provides rigidity and strength to the holder because when the brush is press-fitted into the engagement holes of the holder and brush arm, the brush contact portions press up against the edges of the holder. This advantageously prevents torsion of the brush arm and enhances the overall durability of the holder, which leads to a longer service life of the brush holding device. JP '054 fails to provide brush-pressing portions 9, 10 that are formed on edges in a longitudinal direction of the brush arm 1. In fact, JP '054 does not teach that brush arm 1 has brush contacting portions that extend through the insertion hole 8 of the fixing plate 7 as featured in the claimed combination. As such, the prior art as a whole takes a different approach and fails to suggest the features of the present

invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 1 as now presented.

Claims 2 and 3 have been rejected under 35 U.S.C. 103(a) as being unpatentable over JP '054 and further in view of Yoshida (US 4,238,703).

Although Yoshida teaches a brush device having a brush fitting section having a pair of brush holding flaps which are mutually opposed along a lengthwise direction of the holder, the references as a whole fail to suggest the combination of features claimed. Specifically, JP '054 and Yoshida provide no teaching for the combination of a brush arm having brush contact portions that extend through an engagement hole of a holder when the brush arm is connected to the holder. The references together do not suggest the combination of features claimed. One of ordinary skill in the art is presented with various concepts, but these concepts do not provide any direction as to combining the features claimed. All claims define over the prior art as a whole.

Applicant has added new claims 4-7. New independent claim 4 highlights the arrangement of the brush contact portions that engage the engagement portion of the brush. New independent claim 6 provides for similar features as new independent claim 4, but in different claim language. New claims 5 and 7 have been added to further define the features of the invention. Applicant respectfully requests that the Examiner favorably consider new claims 4-7.

Favorable consideration on the merits is respectfully requested.

Respectfully submitted
for Applicant,



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Attached: (1) Replacement Sheets of Drawings

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